

What is claimed is:

1           1.       A machine-implemented method, comprising:  
2           creating, within a global operating system environment provided by an operating  
3           system, a non-global partition which serves to isolate processes running within that  
4           partition from other non-global partitions within the global operating system  
5           environment;  
6           maintaining a file system for the non-global partition, the file system comprising  
7           one or more mounts;  
8           receiving a request from a process running within the non-global partition to view  
9           information for mounts;  
10          determining that the process is running within the non-global partition; and  
11          providing to the process information for only those mounts that are within the file  
12          system for the non-global partition.

1           2.       The method of claim 1, wherein the file system for the non-global  
2           partition is part of an overall file system maintained for the global operating system  
3           environment, and wherein the overall file system comprises one or more other mounts  
4           that are not within the file system for the non-global partition.

1           3.       The method of claim 1, wherein maintaining comprises:  
2           associating the one or more mounts with the non-global partition.

1           4.       The method of claim 3, wherein the non-global partition has a mount data  
2 tracking structure associated therewith, and wherein associating comprises:  
3           adding entries corresponding to the one or more mounts to the mount data  
4 tracking structure associated with the non-global partition.

1           5.       The method of claim 4, wherein the mount data tracking structure  
2 associated with the non-global partition comprises a linked list of mount entries.

1           6.       The method of claim 4, wherein providing comprises:  
2           accessing the mount data tracking structure associated with the non-global  
3 partition; and  
4           determining, based upon the mount data tracking structure associated with the  
5 non-global partition, the one or more mounts within the file system for the non-global  
6 partition.

1           7.       The method of claim 1, wherein the file system for the non-global  
2 partition has a root directory, and wherein providing comprises:  
3           determining which mounts are within the file system for the non-global partition  
4 by determining which mounts are under the root directory, or a subdirectory thereof.

1           8.       The method of claim 1, wherein maintaining comprises:  
2           establishing a root directory for the file system, and establishing the one or more  
3 mounts under the root directory, or a subdirectory thereof.

1           9.     The method of claim 1, wherein creating comprises assigning a unique  
2 identifier to the non-global partition.

1           10.    The method of claim 9, wherein determining comprises:  
2 extracting, from a data structure associated with the process, a partition identifier;  
3 and  
4 using the partition identifier to determine the non-global partition.

1           11.    The method of claim 1, wherein the file system for the non-global  
2 partition has a root directory, and wherein providing comprises:  
3 indicating to the process that the root directory is one of the one or more mounts.

1           12.    The method of claim 1, wherein the file system for the non-global  
2 partition has a root directory, wherein the root directory has an associated path, wherein  
3 each of the one or more mounts is under the root directory, or a subdirectory thereof, and  
4 wherein providing comprises:  
5 showing, to the process, each of the one or more mounts without including the path to  
6 the root directory.

1           13.    An apparatus, comprising:  
2 a mechanism for creating, within a global operating system environment provided  
3 by an operating system, a non-global partition which serves to isolate processes running

4 within that partition from other non-global partitions within the global operating system  
5 environment;

6 a mechanism for maintaining a file system for the non-global partition, the file  
7 system comprising one or more mounts;

8 a mechanism for receiving a request from a process running within the non-global  
9 partition to view information for mounts;

10 a mechanism for determining that the process is running within the non-global  
11 partition; and

12 a mechanism for providing to the process information for only those mounts that  
13 are within the file system for the non-global partition.

1 14. The apparatus of claim 13, wherein the file system for the non-global  
2 partition is part of an overall file system maintained for the global operating system  
3 environment, and wherein the overall file system comprises one or more other mounts  
4 that are not within the file system for the non-global partition.

1 15. The apparatus of claim 13, wherein the mechanism for maintaining  
2 comprises:  
3 a mechanism for associating the one or more mounts with the non-global  
4 partition.

1           16.     The apparatus of claim 15, wherein the non-global partition has a mount  
2     data tracking structure associated therewith, and wherein the mechanism for associating  
3     comprises:

4           a mechanism for adding entries corresponding to the one or more mounts to the  
5     mount data tracking structure associated with the non-global partition.

1           17.     The apparatus of claim 16, wherein the mount data tracking structure  
2     associated with the non-global partition comprises a linked list of mount entries.

1           18.     The apparatus of claim 16, wherein the mechanism for providing  
2     comprises:

3           a mechanism for accessing the mount data tracking structure associated with the  
4     non-global partition; and

5           a mechanism for determining, based upon the mount data tracking structure  
6     associated with the non-global partition, the one or more mounts within the file system  
7     for the non-global partition.

1           19.     The apparatus of claim 13, wherein the file system for the non-global  
2     partition has a root directory, and wherein the mechanism for providing comprises:

3           a mechanism for determining which mounts are within the file system for the non-  
4     global partition by determining which mounts are under the root directory, or a  
5     subdirectory thereof.

1           20.     The apparatus of claim 13, wherein the mechanism for maintaining  
2 comprises:  
3           a mechanism for establishing a root directory for the file system, and establishing  
4 the one or more mounts under the root directory, or a subdirectory thereof.

1           21.     The apparatus of claim 13, wherein the mechanism for creating comprises  
2 a mechanism for assigning a unique identifier to the non-global partition.

1           22.     The apparatus of claim 21, wherein the mechanism for determining  
2 comprises:  
3           a mechanism for extracting, from a data structure associated with the process, a  
4 partition identifier; and  
5           a mechanism for using the partition identifier to determine the non-global  
6 partition.

1           23.     The apparatus of claim 13, wherein the file system for the non-global  
2 partition has a root directory, and wherein the mechanism for providing comprises:  
3           a mechanism for indicating to the process that the root directory is one of the one  
4 or more mounts.

1           24.     The apparatus of claim 13, wherein the file system for the non-global  
2 partition has a root directory, wherein the root directory has an associated path, wherein

3 each of the one or more mounts is under the root directory, or a subdirectory thereof, and  
4 wherein the mechanism for providing comprises:  
5 a mechanism for showing, to the process, each of the one or mounts without  
6 including the path to the root directory.

1 25. A machine-readable medium, comprising:  
2 instructions for causing one or more processors to create, within a global  
3 operating system environment provided by an operating system, a non-global partition  
4 which serves to isolate processes running within that partition from other non-global  
5 partitions within the global operating system environment;  
6 instructions for causing one or more processors to maintain a file system for the  
7 non-global partition, the file system comprising one or more mounts;  
8 instructions for causing one or more processors to receive a request from a  
9 process running within the non-global partition to view information for mounts;  
10 instructions for causing one or more processors to determine that the process is  
11 running within the non-global partition; and  
12 instructions for causing one or more processors to provide to the process  
13 information for only those mounts that are within the file system for the non-global  
14 partition.

1 26. The machine-readable medium of claim 25, wherein the file system for the  
2 non-global partition is part of an overall file system maintained for the global operating

3 system environment, and wherein the overall file system comprises one or more other  
4 mounts that are not within the file system for the non-global partition.

1 27. The machine-readable medium of claim 25, wherein the instructions for  
2 causing one or more processors to maintain comprises:

3 instructions for causing one or more processors to associate the one or more  
4 mounts with the non-global partition.

1 28. The machine-readable medium of claim 27, wherein the non-global  
2 partition has a mount data tracking structure associated therewith, and wherein the  
3 instructions for causing one or more processors to associate comprises:

4 instructions for causing one or more processors to add entries corresponding to  
5 the one or more mounts to the mount data tracking structure associated with the non-  
6 global partition.

1 29. The machine-readable medium of claim 28, wherein the mount data  
2 tracking structure associated with the non-global partition comprises a linked list of  
3 mount entries.

1 30. The machine-readable medium of claim 28, wherein the instructions for  
2 causing one or more processors to provide comprises:  
3 instructions for causing one or more processors to access the mount data tracking  
4 structure associated with the non-global partition; and



5 instructions for causing one or more processors to determine, based upon the  
6 mount data tracking structure associated with the non-global partition, the one or more  
7 mounts within the file system for the non-global partition.

1 31. The machine-readable medium of claim 25, wherein the file system for the  
2 non-global partition has a root directory, and wherein the instructions for causing one or  
3 more processors to provide comprises:

4 instructions for causing one or more processors to determine which mounts are  
5 within the file system for the non-global partition by determining which mounts are under  
6 the root directory, or a subdirectory thereof.

1 32. The machine-readable medium of claim 25, wherein the instructions for  
2 causing one or more processors to maintain comprises:

3 instructions for causing one or more processors to establish a root directory for  
4 the file system, and to establish the one or more mounts under the root directory, or a  
5 subdirectory thereof.

1 33. The machine-readable medium of claim 25, wherein the instructions for  
2 causing one or more processors to create comprises instructions for causing one or more  
3 processors to assign a unique identifier to the non-global partition.

1 34. The machine-readable medium of claim 33, wherein the instructions for  
2 causing one or more processors to determine comprises:

3 instructions for causing one or more processors to extract, from a data structure  
4 associated with the process, a partition identifier; and  
5 instructions for causing one or more processors to use the partition identifier to  
6 determine the non-global partition.

1 35. The machine-readable medium of claim 25, wherein the file system for the  
2 non-global partition has a root directory, and wherein the instructions for causing one or  
3 more processors to provide comprises:  
4 instructions for causing one or more processors to indicate to the process that the  
5 root directory is one of the one or more mounts.

1 36. The machine-readable medium of claim 25, wherein the file system for the  
2 non-global partition has a root directory, wherein the root directory has an associated  
3 path, wherein each of the one or more mounts is under the root directory, or a  
4 subdirectory thereof, and wherein the instructions for causing one or more processors to  
5 provide comprises:  
6 instructions for causing one or more processors to show, to the process, each of  
7 the one or mounts without including the path to the root directory.